

REMARKS

1. Summary of the Office Action

In the Office Action mailed September 1, 2009, claims 1, 5, 6, 8, 31, and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sitaraman (U.S. Patent No. 6,442,165), in view of Luther (U.S. Patent Application No. 2003/0023877) and O'Neill (European Patent No. EP 1,137,236). Additionally, claims 10, 13, 16, 26, and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sitaraman in view of Zisapel (U.S. Patent No. 6,665,702). Furthermore, claims 12 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sitaraman in view of Zisapel and O'Neill. Moreover, claim 28 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sitaraman in view of Zisapel, O'Neill and Schuster (U.S. Patent No. 6,577,622). Finally, claim 30 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sitaraman in view of Zisapel and Luther.

2. Status of the Claims

Currently pending are claims 1, 5, 6, 8, 10, 12, 13, 16, and 26-34. Of these, claims 1, 6, 8, 10, 13, and 26 are independent. Applicant has added new claims 33-34, which are supported by Applicant's Specification, pages 10-12, as well as generally throughout Applicant's Specification and Drawings.

3. Rejection of claims 1, 6, and 8 under 35 U.S.C. § 103(a)

This present invention relates to load balancing. Specifically, a control node may be provided that balances a traffic load sent to downstream proxies in a network. The control node may maintain information that is used, at least in part, to assign the traffic load to the proxies.

For example, independent claims 1, 6, and 8, as currently amended, are generally directed to a control node that maintains a list of downstream proxies. The control node receives load

information from a plurality of the downstream proxies in the list, and also determines a delay time between the control node and the each of the downstream proxies. The control node then assigns a weight to each of the downstream proxies. The weight is based upon the respective load information for each downstream proxy, and/or the respective calculated delay time for each downstream proxy. Then, the control node distributes a traffic load to one of the plurality of downstream proxies based in part on the weight of each of the downstream proxies.

In particular, the control node determines the delay time by transmitting an invalid SIP message to each of the downstream proxies in the plurality. The control node receives a respective SIP response message from each of the downstream proxies in the plurality rejecting the respective invalid SIP message, and then calculates, as the delay time, a difference between the transmission of each invalid SIP message and the receiving of each corresponding SIP response message.

The Office Action rejected claims 1, 6, and 8 as being obvious over the combination of Sitaraman, Luther, and O'Neill. In particular, the Office Action stated that O'Neill teaches an invalid SIP message at paragraph 40. However, O'Neill does not teach an invalid SIP *message*. Rather, O'Neill only teaches an otherwise valid SIP message with an invalid *destination SIP URL address*. O'Neill states at col. 9, lines 44-52:

In step 512 a network server having authority for the domain for the destination SIP URL determines whether the destination SIP URL address is a valid network address, that is to say, whether the SIP URL address has been allocated by the domain authority to a SIP user. The SIP URL destination address is a valid network address if it can be resolved by a location database using DNS or other resolution means to a respective numerical IP address, for example.

Thus, O'Neill is addressing a situation where a SIP URL address, not the SIP message, is invalid. In addition, O'Neill teaches that the making the determination of invalidity uses a location database to attempt to resolve the SIP URL address.

Unlike the subject matter recited by claims 1, 6, and 8, O'Neill fails to teach rejecting an invalid SIP message. If anything, O'Neill teaches implicitly accepting a SIP message with an invalid destination SIP URL address, and processing this SIP message further. For example, col. 10, lines 11-17, O'Neill states:

The destination SIP URL may be invalid for instance because it was automatically generated from a known e-mail address identifier in step 504 and no corresponding SIP address exists. Under these circumstances the message processor 420 re-formats the SIP message to an SMTP message for communication over the Internet 406 in accordance with SMTP in step 518.

Thus, not only does O'Neill fail to teach invalid SIP messages, but O'Neill also fails to teach rejecting an invalid SIP message. Moreover, as far as Applicant can tell, Luther also does not teach rejecting an invalid SIP message. Further, as the Office Action stated, Sitaraman does not teach using the SIP protocol. Therefore, the claimed subject matter contains elements missing from the combination of the cited references, and this combination does not reasonably or logically lead to the invention as claimed.

Accordingly, and without conceding any of the Office Action's statements not explicitly addressed herein, Applicant submits that claims 1, 6, and 8, are allowable. Furthermore, claims 5, and 31-34 are also allowable, at least for the reason that they depend from an allowable claim.

4. Rejection of claims 10, 13, and 26 under 35 U.S.C. § 103(a)

Claims 10, 13, and 26 are generally directed to a control node distributing load to proxies. The control node gathers roundtrip delay information used to weight each proxy. Then, the control node receives a new call and determining a call volume. If the call volume is below a threshold low value, the control node assigns the new call to a proxy of the group of proxies based on a round robin protocol. But if the call volume is above the threshold low value, the

control node assigns the new call to a proxy of the group of proxies based upon the weights for each proxy.

The Office Action rejected these claims as being obvious over the combination of Sitaraman and Zisapel. In particular, the Office Action stated that Zisapel at col. 1, lines 24-35 teaches the steps of receiving a new call, determining a call volume, if the call volume is below the threshold low value, assigning the new call to a proxy of the group of proxies based on a round robin protocol, and if the call volume is above the threshold value, assigning the new call to a proxy of the group of proxies based upon the weights assigned to each proxy.

However, Zisapel at col. 1, lines 24-35 states:

In one early implementation of load balancing, a Domain Naming System (DNS) server connected to the Internet is configured to maintain several IP addresses for a single domain name, with each address corresponding to one of several servers having redundant capabilities. The DNS server receives a request for address translation and responds by returning the list of server addresses from which the client chooses one address at random to connect to. Alternatively, the DNS server returns a single address chosen either at random or in a round-robin fashion, or actively monitors each of the servers and returns a single address based on server load and availability.

Zisapel discloses choosing a DNS server randomly, in round-robin fashion, or based on server load or availability. However, Zisapel fails to teach choosing a proxy based on a round-robin protocol when call volume is low and based on weights assigned to each proxy when the call volume is not low. Additionally, the weights recited in claims 10, 13, and 26 are based on measured delay between the control node and each proxy, while Zisapel's "weights" are based on load and availability.

For these reasons, and without conceding any of the assertions made in the Office Action that were not addressed herein, Applicant submits that claims 10, 13, and 26 are allowable.

Furthermore, claims 12, 16, and 27-30 are also allowable at least for the reason that they depend from an allowable claim.

5. Summary

Applicants respectfully submit that, in view of the remarks above, the present application is in condition for allowance and solicit action to that end. It should be understood that the scope of the invention is determined by the claims, and any discussion of pending claims has been presented for purposes of illustration, and should be construed to be limiting. If there are any matters that may be resolved or clarified through a telephone interview, the Examiner is respectfully requested to contact Applicants' undersigned representative at (312) 913-3361.

Respectfully submitted,

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